

### ABSTRACT

The invention involves methods and materials for treating and preventing non-invasive fungus-induced mucositis. Specifically, the invention involves administering an antifungal agent such that it contact mucus in an amount, at a frequency, and for a duration effective to prevent, reduce, or eliminate non-invasive fungus-induced rhinosinusitis. This invention also provides methods and materials for diagnosing non-invasive fungus-induced rhinosinusitis and culturing non-invasive fungus from a mammalian mucus sample as well as specific antifungal formulations and medical devices for treating and preventing non-invasive fungus-induced rhinosinusitis. In addition, the invention provides methods and materials for treating and preventing other non-invasive fungus-induced mucositis conditions such as chronic otitis media, chronic colitis, and Crohn's disease. Further, the invention involves methods and materials for treating and preventing chronic asthma symptoms.